



# GC-S84

Safety input / output unit



\*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

## Specifications

|                                    |                              |                                                                         |
|------------------------------------|------------------------------|-------------------------------------------------------------------------|
| Model                              |                              | GC-S84                                                                  |
| Input/output points                | Safety inputs                | 8                                                                       |
|                                    | Safety outputs               | 4 (PNP)                                                                 |
|                                    | Safety relay output          | -                                                                       |
|                                    | AUX outputs                  |                                                                         |
|                                    | Test outputs                 | 2                                                                       |
| Safety input specifications        | Input device                 | Contact output device or PNP output device                              |
|                                    | Input type                   | Type3                                                                   |
|                                    | ON level (voltage/current)   | Min. 11 V/2 mA                                                          |
|                                    | OFF level (voltage/current)  | Max. 5 V/1.5 mA                                                         |
|                                    | Short-circuit current        | Approx. 3 mA                                                            |
|                                    | Protection circuit           | Surge protection circuit, wrong wiring protection circuit               |
|                                    | Maximum cable length         | Max. 100 m <a href="#">328.1'</a>                                       |
| Safety output specifications       | Output type                  | PNP transistor output (DC-13, Type 0.5, Protected outputs)*1            |
|                                    | Maximum load current         | 500 mA                                                                  |
|                                    | Residual voltage (during ON) | Max. 2.0 V                                                              |
|                                    | Leakage current (during OFF) | Max. 0.5 mA                                                             |
|                                    | Maximum capacitive load      | 0.5 µF                                                                  |
|                                    | Load wiring resistance       | Max. 2.5 Ω                                                              |
|                                    | Protection circuit           | Overcurrent protection circuit, reverse connection protection circuit   |
|                                    | Maximum cable length         | Max. 30 m <a href="#">98.4'</a>                                         |
| Safety relay output specifications | Output type                  | -                                                                       |
|                                    | Rated load (resistance load) |                                                                         |
|                                    | Rated load (inductive load)  |                                                                         |
|                                    | Relay output mechanical life |                                                                         |
|                                    | Maximum cable length         |                                                                         |
|                                    | B10d                         |                                                                         |
| Test output specifications         | Output type                  | PNP transistor output*2                                                 |
|                                    | Maximum load current         | 100 mA*2                                                                |
|                                    | Protection circuit           | Overcurrent protection circuit, reverse connection protection circuit*2 |
|                                    | Maximum cable length         | Max. 100 m <a href="#">328.1'</a> *3*2                                  |
| AUX output specifications          | Output type                  | -                                                                       |
|                                    | Maximum load current         |                                                                         |
|                                    | Residual voltage (during ON) |                                                                         |
|                                    | Leakage current (during OFF) |                                                                         |

|                          |                      |                                                                                                                                                                        |
|--------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          | Protection circuit   |                                                                                                                                                                        |
|                          | Maximum cable length |                                                                                                                                                                        |
| Applicable standards     | EMC                  | EMS: IEC 61131-2/-6, EN61131-2/-6, EMI: IEC 61131-2, FCC Part15B Class A, ICES-003, Class A                                                                            |
|                          | Safety               | IEC 61508, EN 61508 SIL3, IEC62061 SIL CL3, ISO/EN 13849-1:2015 Cat. 4, PL e, UL1998                                                                                   |
| Dimensions               |                      | 22.2×95×90 mm <a href="#">0.87"×3.74"×3.54"</a> (W×D×H)                                                                                                                |
| Power supply             | Power voltage        | 24 VDC (-20 to +20%) Class 2                                                                                                                                           |
|                          | Power consumption    | Max. 60 mA                                                                                                                                                             |
| Environmental resistance | Ambient temperature  | -10 to +55 °C <a href="#">14 to 131 °F</a> (No freezing)                                                                                                               |
|                          | Relative humidity    | 5 to 85% (No condensation)                                                                                                                                             |
|                          | Storage temperature  | -25 to +70 °C <a href="#">-13 to 158 °F</a> (No freezing)                                                                                                              |
|                          | Operating altitude   | Max. 2000 m <a href="#">6561.7'</a>                                                                                                                                    |
|                          | Overvoltage category | II                                                                                                                                                                     |
|                          | Pollution degree     | 2                                                                                                                                                                      |
|                          | Vibration resistance | Frequency: 5 to 9 Hz, Half amplitude: 3.5 mm <a href="#">0.14"</a><br>Frequency: 9 to 150 Hz, Acceleration: 10 m/s <sup>2</sup><br>10 times each in X, Y, Z directions |
|                          | Shock resistance     | Acceleration: 150 m/s <sup>2</sup> , Operating time: 11 ms, 3 times each in X, Y, Z directions                                                                         |
| Material                 |                      | Polycarbonate                                                                                                                                                          |
| Weight                   |                      | Approx. 130 g                                                                                                                                                          |

\*1 Paragraph 6.4.6 Temporary overload of IEC 61131-2 supports up to 1.2 times the maximum load current.

\*2 Test outputs do not comply with paragraph 6.4 of IEC 61131-2.

\*3 When the test output is branched and connected to multiple safety input devices, the total branched cable length must not exceed 400 m [1312.3'](#).

# Dimensions

\* Download CAD file or product manual for larger image/text and more detail.

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